

**REMARKS**

Applicants request the Examiner to enter this Preliminary Amendment and thereafter pass this case on to allowance.

Claims 1 and 4-10 remain pending. New claims 11 and 12 find basis in the specification throughout, although the Examiner may note pages 1 and 11 plus the Examples.

In seeking to solve problems in the art, the art has proposed a number of solutions. Papers or non-woven fabrics have been proposed made from a mixture of synthetic and natural fibers. Specification at page 1. But these proposals caused other problems, including creasing and jamming. Efforts to resolve the latter problems were not successful. Specification at page 2.

The present claimed inventions pertain to a heat-sensitive stencil sheet which causes no jamming, or at least reduces incidence of jamming, in a stencil printing machine during feeding and no or at least reduced creasing, while providing sharp images. *See, e.g.*, specification, page 1.

Applicants' invention includes an embodiment directed to a heat-sensitive stencil sheet that includes a laminate of a thermoplastic resin film and a porous fibrous substrate (claim 1), which in one embodiment is mainly composed of synthetic fibers (claim 10). Specification, throughout, noting pages 1-2. This heat-sensitive stencil sheet satisfies the relationship  $0.150 \leq T-H$  wherein T means an arithmetic average value ( $g \cdot cm/cm$ ) of absolute values of KES bending torque in lengthwise direction of the stencil sheet at curvatures of  $+2.3$  and  $-2.3$  ( $cm^{-1}$ ), H means a bending hysteresis ( $g \cdot cm/cm$ ), and T-H means a residual torque ( $g \cdot cm/cm$ ). It is indicative of the fibers and their physical entanglement.

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Applicants' new claim 12 is directed to a stencil printing method which involves reducing incidence of jamming and essentially avoiding creasing the heat-sensitive stencil sheet on the printing drum of a stencil printing apparatus. The objects are thought to be achieved by selecting stencil sheet(s) having the specified combination of properties, which properties are thought to be indicative of the stencil sheet selected. That is, the stencil sheets are not the general population of just any stencil sheet(s) produced by any method, but are essentially those manifesting the combination of physical characteristics.

Whether each of claims 1 and 4-10 defines a novel invention over U.S. Patent No. 6,025,286 to Kawatsu et al.?

The Examiner's thesis, as stated previously in the prosecution history, is that "[s]ince the prior art teaches all of Applicant's claimed compositional and positional [sic] limitations, the reference it is inherent that the prior art article functions in the same manner as claimed by Applicants." Advisory Action, August 14, 2001, page 2. The Examiner's stated rationale for the inherency rejection under 35 U.S.C. §102(e) apparently remains grounded on a belief that the cited prior art Kawatsu et al. reference "uses the same materials as the current invention" and therefore "the prior art ... possesses the claimed properties (i.e., tensile strength, a value of T-H greater than or equal to 0.150)." Office Action, March 27, 2001, page 2.

Applicants respectfully submit that the alleged inherency rejection under 35 U.S.C. §102(e) over the Kawatsu et al. reference be reconsidered and withdrawn.

Applicants respectfully suggest that the asserted inherency rests on a misunderstanding or mis-communication regarding what the reference really describes and what Applicants regard as their claimed inventions.

Claim 1 concerns a physical, tangible object, namely a heat-sensitive stencil sheet. The claimed stencil sheet comprises a laminate of a thermoplastic resin film and a porous fibrous substrate. The stencil sheet has a certain structure, including fibers in the porous substrate in a certain tangled state, and this *structural* feature is defined in claim 1 by reciting "said stencil sheet satisfying  $0.150 \leq T-H$  wherein T means an arithmetic average value ( $\text{g} \cdot \text{cm}/\text{cm}$ ) of absolute values of KES bending torque in [the] lengthwise direction of the stencil sheet at curvatures of  $+2.3$  and  $-2.3$  ( $\text{cm}^{-1}$ ), H means a bending hysteresis ( $\text{g} \cdot \text{cm}/\text{cm}$ ), and T-H means a residual torque ( $\text{g} \cdot \text{cm}/\text{cm}$ )."

As to the inherency, Applicants acknowledge with appreciation the Examiner's request for further clarification regarding the Nakao Declaration and the Kawatsu reference. Applicants respectfully submit that comparison of the Nakao Declaration and the Kawatsu reference will show evidence of record rebuts the alleged inference of inherency. *See, e.g., by analogy, In re Rinehart*, 189 USPQ 185 (CCPA 1976) (decision maker must start over again when rebuttal evidence introduced, evidence submitted must be evaluated anew uninfluenced by any earlier decision, and not solely as "knock down" ability against a fixed rejection). The Nakao declaration includes Sample 2, which has a basis weight of  $11.0 \text{ g}/\text{cm}^2$ , an average fiber diameter of 3.8 micrometers, and a film thickness of 1.5 micrometers. This compares closely with the Kawatsu reference's Example 2, which reports a product with a basis weight of  $11.0 \text{ g}/\text{cm}^2$ , an average fiber diameter of 4.0 micrometers, and film thickness of 1.2 micrometers. The Examiner will further appreciate that the Nakao product (not commercialized, not public) exhibited inferior performance. Similarly, one would expect like inferior performance from the product according to Example 2 in the Kawatsu reference.

Applicants also direct the Examiner to Comparative Example 1 versus the Kawatsu reference. Comparative Example 1 meets the properties according to the Kawatsu reference. The Examiner is respectfully urged to review Table 1, page 20, in the specification versus Kawatsu at column 3, lines 63-67 (film thickness of 0.1 to  $5\mu\text{m}$ ); column 4, lines 5-8 (average

fiber diameter of 0.5 to 20  $\mu\text{m}$ ); and column 4, lines 14-17 (basis weight of fibers of 1 to 20  $\text{g/m}^2$ , preferably 3 to 14  $\text{g/m}^2$ ). The Comparative Example 1 product creased on the drum as seen from Table 1, page 21, herein.

Applicants acknowledge with appreciation that the Kawatsu reference has been determined by the Examiner not to disclose stencil printing sheets that can be discriminated from each other on the basis of tensile strength, T-H value, and KES bending rigidity value B. This would appear to be the point made in the Office Action, page 3, lines 1-3.<sup>1</sup> It follows that the record does not include evidence that a person skilled in the art would have recognized the applied prior art reference necessarily, inevitably, inherently disclosed the presently claimed invention, including its definition of residual torque, regardless of whether residual torque is regarded as characterizing a structural limitation or whether it is a new result effective variable enabling one to have stencil sheets that are capable of being used without propensity to crease on a stencil printing drum. Elan Pharmaceuticals v. Mayo Clinic, Appeal No. 00-1467 (Fed. Cir. August 30, 2002) (reversing inherency anticipation).

The Kawatsu reference did not appreciate the discrimination between stencil sheets generally in a population of stencil sheets and the sheets as claimed as seen from column 4, lines 22-27. There the Kawatsu reference focuses on a conventional approach, which neither describes nor suggests the present claimed stencil sheets, nor a stencil printing method involving providing a selected species of stencil sheets having the defined physical properties so as to achieve a reduction in the tendency of stencil sheets to jam during stencil printing, and to avoid essentially creasing stencil sheets on the stencil printing drum.

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<sup>1</sup> As seen from the record, the orientation parameters mentioned in the Kawatsu et al. reference do not concern the residual torque (T-H); the former is required to improve performance sensitivity and printability as described in Kawatsu et al. (particularly Table 2), whereas the latter is important according to the present invention so that the selected stencil printing sheet can to avoid being creased on the printing drum.

Still further evidence contravening the assumptions underlying the rejection lies with the general prior art perception that the greater the orientation parameter (R2) of the fibers of the porous substrate, the greater the tensile strength of the stencil sheet becomes. The prior art perception would mean the stencil sheet seems to be improved in runability as shown in Table 2 in the Kawatsu et al. reference. However, this does not inevitably, necessarily inherently lead to Applicants' residual torque (T-H). For example, the stencil sheet of Comparative Example 1 of the present specification has a tensile strength of 0.38 kgf/cm which is equivalent to or greater than the stencil sheets of Examples 2 and 3 of the present specification, as shown in page 20, Table 1 of the present specification. However, the Comparative Example 1 shows a residual torque (T-H) considerably lower than the stencil sheets of the Examples 2 and 3, as shown in page 21, Table 1 of the present specification. This demonstrates that Applicants' residual torque, or avoid creasing on drum, is not inherently, necessarily inherent in or even improved by either a greater orientation parameter (R2) or a greater tensile strength. (Applicants considered that the residual torque would be influenced by the interlaced state of the fibers of the porous substrate rather than the state of single fibers such as the orientation parameter (R2).)

Finally, while a simplistic assumption may be that all materials made of the same thing have the same properties, Applicants respectfully submit that it represents an inappropriate overstatement that should be reconsidered and withdrawn. Trees are made of wood, but all trees are not alike. All wood is not the same. Some wood is very dense and strong but that is not true of all wood. Not all oak trees are the same. Or, for instance, aluminum alloys may have similar compositions, but the alloys will manifest different, significant properties depending on slight differences in amounts of alloying ingredients, or depending on the heat treatments and the conditions prevalent during a heat treatment. (One has only to compare properties of 7075AA with 7050AA, just to mention an example.) Polymers include polyolefins, but merely because one polymer is within the sub-genus of polyethylenes does not *ipso facto* mean it is inevitably the same as another polyethylene.

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What about UHMWPE versus PE or branched versus unbranched PE? They may be chemically made of the same carbon atoms and hydrogen atoms but their properties, *i.e.* how they may be characterized and differentiated, are different. So too with stencil sheets.

Applicants therefore submit that their present claimed invention is not anticipated by Kawatsu et al., nor would it have been obvious over the same. Please withdraw the prior art rejection of claims 1 and 4-10 under 35 U.S.C. §102(e) over the Kuwatsu reference and issue a notice of allowance.

Respectfully submitted,

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